if possible, any detrimental excitement. I knew that the majority of the patients of Drs. Bright and Gregory who had recovered from attacks of this disease in some of its various forms, had used diuretics; chiefly supertartrate of potass, squills and digitalis. *A priori,* they appear of doubtful efficacy for good, and latterly Dr. Bright seems to employ them with more hesitation than at first, while Dr. Osborne condemns them. I ventured upon the administration of those above named in small doses, which increased the quantity of the secretion, with some relief to the increasing delirium, stupor and coma. But these latter symptoms made head notwithstanding, and he had almost entirely the appearance of one labouring under typhoid fever. The chances of recovery, small as they were deemed at first, were daily diminishing. For several days before his death he had about every day an attack of a convulsive nature, seemingly from obstruction to inspiration. For the last five or six days of his life there was little to be observed; low muttering delirium or coma filled up the whole history. For two days I had observed the pomum adami, or larynx, and upper part of the trachea very prominent, protruding nearly as far as the chin. The evening before he died I could see no observable change; the pulse was full and strong, and in this consisted the principal difference between my patient's symptoms and those of typhoid fever. In the latter part of the evening his breathing became more laborious, and shortly after midnight the painful history of his disease was closed.

Circumstances prevented my intended post-mortem examination, so that, to my regret, I am unable to subjoin a description of those morbid changes in the kidneys, and perhaps brain, of the existence of which there can be little doubt.

From the first complaint of difficulty of speaking and numbness of the cheek till the day of his death, there intervened about thirty days.

Clinton, Michigan, March 16, 1837.

ART. IV. *Case of Deformity of the Mouth, from a Burn, successfully treated by Dieffenbach's method.* By T. D. MUTTER, M. D., Lecturer on Surgery. [With a Plate.]

The following interesting case came under my charge the latter part of November, 1836. The individual affected was the daughter of a highly respectable practitioner of medicine residing in South

Carolina, and at the time the accident productive of the deformity occurred, about 11 years of age. Her general health has always been perfect, though her temperament is a strongly marked lymphatic.

In the commencement of the winter of 1835, while at play with her companions, she was by some means or other thrust against a heated stove, by which her hands, arms, neck, and the lower part of her face, were severely burned.

Her wounds were treated in a most judicious manner by her father; but, in spite of all his efforts, those about the mouth cicatrized with so much contraction, that the entrance into this cavity was almost obliterated. As soon as the tenderness of the part was somewhat diminished, he commenced a treatment calculated to restore this orifice to its natural size. He first began by introducing sponge tents, which were allowed fully to distend themselves; but, after repeated attempts with them, by which he caused the child much suffering, without materially benefitting her, they were abandoned.

He then attempted to dilate it, by first making an incision of about six lines in length, extending from each angle of the mouth, in an outward and nearly horizontal direction, and afterwards introducing the tents to prevent the lips of the wounds from uniting. This appeared at first to be productive of some good, but in a short time they cicatrized and contracted, and the patient remained in as uncomfortable a condition as before.

Finding himself foiled in both attempts, he determined to visit Philadelphia for the purpose of consultation. She was accordingly brought on, and became a patient of mine. When I first saw her nearly a year had elapsed since the occurrence of the accident. Her appearance at this time was very singular. Firm and dense cicatrices nearly surrounded the mouth, but were most marked on the lower lip, and about the angles; while the orifice of this cavity was barely large enough to admit the point of the finger, and presented an oval form. The cicatrices of the incisions made by her father, were also very apparent at each angle. (See *fig.* 1.) Her general health was perfect, and it was only on account of the deformity and difficulty of taking food that the operation was requested. Her speech was not much affected, although some of the labial sounds were imperfectly pronounced. The lining membrane of the mouth was perfectly normal.

From the history of the case I concluded at once that it would be utterly useless to attempt a cure by the repetition of the measures already employed, and which are the ones usually had recourse to. I therefore proposed the operation recently devised for such cases by

the celebrated Dieffenbach, and her father consenting it was accordingly performed on the 28th of November, 1836.

The patient was seated in a low chair, with her head supported by her father, and exposed to a good light. Following the directions of Dieffenbach, I then introduced the extremity of the fore finger of my left hand into the mouth, and placed it under the left labial angle, which, by this means, was rendered prominent and sufficiently firm to permit the second step of the operation to be readily executed.

This is accomplished by the introduction of one blade of a pair of narrow, straight scissors into the substance of the cheek, between the mucous membrane and the other tissues, and a little above the commissure. The blade is then slowly pushed from before backwards, separating as it passes along the mucous membrane from the muscles and integuments until its point reaches the spot at which we wish to locate the new angle of the lips; the blades are then closed, and the parts included between them cut squarely and smoothly at a single stroke. The first incision being completed, the scissors were withdrawn, and a second one, parallel and similar to the first, made in the lower lip; the distance between the two being about three lines. These incisions were then united at their posterior termination by a small crescentic section.

By these cuts it is evident that a small strip of muscle and integument was insulated from the surrounding parts, and it only remained to separate it from the buceal mucous membrane, which was easily done by a single stroke of the scissors.

The second step of the operation being thus finished on the left side, similar incisions were performed on the right.

Looking at the lines traced out in *fig.* 1, which shew the course of the incisions on each side, it will be seen that two wounds, each about three lines wide and six long, the floors of which were formed by the mucous membrane of the mouth, had been made. The next steps of the operation, and by far the most difficult of the whole, were the division into equal portions of the mucous membranes, the eversion of the flaps, and their attachment to the edges of the incisions just made, as well as to the red pellicle of each margin of the lips.

To divide the membrane equally I separated the jaws of the child as much as possible, by which measure the former was put upon the stretch, and kept sufficiently firm to bear the operation of the scissors. The incisions in the membrane did not extend so far as those made in the muscles and skin, but stopped about three lines from the union of the latter. This was done in order to make the outer portion of this tissue adapt itself accurately to the new commissure. The

flaps were then brought out, reflected over the margins of the wounds and firmly attached to them by means of the twisted suture, the needles used being very short and fine. (It should be recollected that the membrane must be first attached to the commissure, by which measure we secure the proper adaptation of the flaps to the other parts.)

Every thing having been properly adjusted, a common roller bandage was applied, as in cases of fracture of the lower jaw, in order to prevent any derangement of the wounds. The patient was then placed in bed with her head elevated, and as she had just before the operation eaten freely of some light food, ordered to take no nourishment of any kind until the next visit, and to be perfectly silent.

Nov. 29th. Passed a good night; slept well; no fever; and complains of no pain; parts merely a little sore; needles all in place; writes that she is hungry. Ordered thin oat meal gruel as diet, which, as well as her drink, is to be given with a small teaspoon.

30th. Quite as well as yesterday; every thing in place; bowels costive. Ordered an injection of white soap and water; diet as before.

31st. Complains of stiffness in the wounds, but no pain; dressings all secure; injection had operated well; pulse natural. Ordered chicken soup for diet.

Dec. 1st. The bandage was removed and the first dressing commenced. The sutures which had been closely bound down to the parts by blood, were carefully softened with warm water and cut away. As soon as they were removed, and the parts properly dried, the most gratifying exhibition of the success of the operation was afforded. On both sides union between the reverted mucous membrane and the margins of the wounds had taken place nearly throughout, and the *new lips* presented an appearance almost natural. Some of the needles were then removed, but as there appeared to be a feebleness in the adhesion at some points, the needles passing through them were allowed to remain, and a thread cast loosely around them. The bandage around the head was also reapplied.

2nd. Second dressing, parts all firm and healthy; the remaining needles were now removed, and the bandage only reapplied, which was done to prevent talking; no pain in the part, and the patient in fine spirits. Ordered bowels to be opened with an injection, and the diet to be more nutritious, but still liquid.

Nothing remarkable occurred in the subsequent treatment. All dressings were taken off on the 15th inst., and the child allowed to pursue her ordinary course of life. The mouth presented a very good appearance, though the lips were somewhat thinner than natural,

and there was some difficulty in bringing them into close contact, especially at the central portions. I have no doubt, however, but that this defect will soon disappear. (*Fig.* 2, represents her eight weeks after the operation.)

Remarks. The annals of modern surgery hardly afford an example of more ingenuity than is exhibited in the design of the operation just detailed. Dieffenbach, whose fame as a rhinoplastic surgeon is just beginning to be appreciated in this country, and whose skill and success fully justify the eulogiums which are now bestowed upon him, having been foiled in several attempts made to relieve cases similar to the above, at last hit upon the beautiful expedient illustrated by the operation. The great difficulty in all such cases arises from the constant tendency to contraction manifested by the cicatrice, which occasionally goes on to such an extent that the orifice of the mouth is almost closed. At the first examination of such a deformity, the remedy which seems to promise most success, is mechanical dilatation. Unfortunately this is productive of but temporary relief, and has never, I believe, effected a permanent cure. Next to this method comes incision of the commissures. We might naturally expect such a course to be sufficient to effect the end desired, and in all probability this would be the case could we by any means prevent reunion of the edges of our incisions. But this, it would appear from the statements of the best authorities, has hitherto been impossible; for, notwithstanding the introduction of tents, leaves of sheet lead, cerate cloths, &c. between the lips of the wounds, their adhesion, more or less complete, is sure to take place.

The primary indications in the treatment of such cases then are, 1st. the division of the commissures; and 2nd, the application of some measure by which the margins of the incisions may be made to cicatrize separately. Aware of the difficulties attendant upon the fulfilment of these indications, it occurred to Dieffenbach that if we could cover these margins with a tissue which would not readily unite with itself, that a cure would be accomplished. He accordingly performed the operation which I have just described, and his success was such as to lead to his repetition of it in several cases, in all of which the most happy results were obtained. There can be no doubt relative to the value of this new process, as it is applicable to almost every case of contraction of the natural openings, either congenital or acquired. It is moreover safe, and but slightly painful. The whole operation when performed on the mouth may be accomplished in ten or fifteen minutes, and there is little or no hæmorrhage to be apprehended, for the branches of the coronary arteries which are divided

are so small that they contract of their own accord, and do not require the ligature.

There is one case, however, in which it would not in all probability succeed, viz. when the buccal mucous membrane itself participates in the lesion. But this complication must be of very rare occurrence, as the injury in almost every instance is confined to the outer surface of the surrounding parts. In conclusion, I may remark, that although this is the only case that has come under my immediate observation, the success attending the operation has been such as to lead me to recommend its performance in every instance in which the mucous membrane surrounding the orifice is in a sound condition.

Philadelphia, May, 1837.

ART. V. *Glanders in a Youth.* By J. WIGGINS HEUSTIS, M. D., of Alabama.

Mr. Y———, a butcher, of Mobile, requested me to visit his son, a youth about twelve years of age, who had been sick for ten months, and had been under the care of different physicians at sundry times, but without receiving any benefit. The prevailing belief appeared to be that the disease was mercurial, as at the commencement of his illness he had taken a large dose of calomel, which, although it had operated freely, was supposed to have left its effects upon the system, in the form of ulcerations and rheumatic affections. In fact, the disease appeared to be anomalous and unique. The complaint, for the most part, had been confined to the limbs, but within a few days of the time I saw him it had attacked one side of the face, involving the cheek, eye, and upper lip, which were much tumefied, smooth and shining; the swelling closing the eye of the affected side, and sundry livid and ash-coloured warts or tubercles were seated about the eye and upon the side of the superior portion of the nose. Some of these were denuded of their cuticle, and exuded an ill-conditioned ichorous serosity. The upper lip was much swollen, with a blackish excoriated streak extending from the nostril; the inner and inferior portion of the lip appeared livid, and upon the verge of mortification. There was considerable febrile excitement, hot skin, frequent and tense pulse, and generally considerable thirst. Latterly the febrile symptoms had become more aggravated than formerly, although the appetite had been but little impaired. Previously